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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------|-------------|------------------------------------|---------------------|------------------|
| 10/559,909 | 12/08/2005 | Antonio Maria Guimaraes Leite Cruz | TS6436US | 8294 |
| 23632 | 7590 | 06/24/2008 | | |
| SHELL OIL COMPANY | | | EXAMINER | |
| P O BOX 2463 | | | THOMPSON, KENNETH L | |
| HOUSTON, TX 772522463 | | | | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3672 | |
| | | | MAIL DATE | DELIVERY MODE |
| | | | 06/24/2008 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary**Application No.**

10/559,909

Applicant(s)CRUZ, ANTONIO MARIA
GUIMARAES LEITE**Examiner**

Kenneth Thompson

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-7, 9, 11 and 12 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8, 10, 14, 15 and 20 is/are rejected.
- 7) ☒ Claim(s) 13 and 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 8, 10, 14, 15 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Dulaney, U.S. 2,998,085.

Dulaney discloses a rotary percussion (col. 1, lines 7-22) drill bit (col. 3, lines 16-24) having a pair of shear or axially extending blade cutters (24) and an axial cutter (27) arranged to pierce the borehole (fig 1) prior to and below than the shear cutters (24). Dulaney discloses the cutting edge (28) of the axial cutter being domed or roof-like (fig 1).

Response to Arguments

Applicant's arguments filed 17 March 2008 have been fully considered but they are not persuasive.

Applicants argue the prior art does not disclose the chopping axial bit cutter and the scrapping shear bit cutter receiving percussive impact.

The prior art states the chopping bit receives substantial impact in corporation with scrapping and pounding action of the shear cutters (col. 3, lines 16-24).

Applicants argue the percussion axial chopping bit cutters do not impact the bottom earlier than the scrapping shear bit cutters because the scraping bit must be in contact with the bottom of the hole.

Applicants should note the percussion chopping axial bit penetrates below the location of the scrapping shear bit cutters to contact the subterranean earth formation before the borehole creating scrappers. The rejected claims do not require impacting the bottom of the hole earlier as argued.

Applicants should note the amended claims could have been finally rejected on the grounds and art of record in the next office action if they had been entered in the application prior to the entry of the RCE.

Allowable Subject Matter

Claims 3-7, 9, 11 and 12 are allowed.

Claims 13 and 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Thompson whose telephone number is 571 272-7037. The examiner can normally be reached on 6:00 am - 2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David J. Bagnell can be reached on 571-272-6999. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

11 June 2008

/Kenneth Thompson/
Primary Examiner
Art Unit 3672